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### CLOUDS ON THE CUCAMONGA MOUNTAINS.<sup>1</sup>

By Mr. G. R. ROUNTHWAITE, dated Avalon, Santa Catalina Island.

I am sending you solio prints of the storm on the Cucamonga Mountains, also a solio print of the same mountains taken on the following morning. The panoramic view of the mountains (figs. 1 and 2) was taken about 4 p. m. with the rear combination of a rapid rectilinear lens and a Bausch and Lomb color screen, or ray filter, at an elevation of 925 feet above sea level and at a distance of about 35 miles from the mountains. The summit of Cucamonga Peak is about 9800 feet above sea level. The trees in the foreground are orange trees on the Arlington Heights district of Riverside. The following points are indicated by numbers on the print:

1, 1. Sand flats of southeast Ontario. The wind coming over the mountains and through Cajon Pass is so strong that the sand is raised in the air thick enough to obliterate the view of the mountains beyond. Railroads have much trouble with the sand blowing into the cuts, and they guard against it by fences similar to the snow fences in the north. The hills in the mid-distance seem to concentrate the wind over these flats. There is now an immense vineyard planted in this district.

2, 2. The mouth of San Antonio Canyon and the higher citrus lands of Ontario Colony at the head of Euclid avenue.

3, 3. The citrus colony at Lomosa, which gets its water from the stream in Cucamonga Canyon.

4, 4. Northrup and Hurd's ranch, where oranges, lemons, plums, peaches, prunes, and olives are raised; the water supply comes from a tunnel into the mountains.

5, 5. De Mense, a citrus orchard of 40 acres; this also has a private water right through a tunnel into the mountains.

9, 9. Cajon Pass. Notice the cigar-shaped cloud crossing behind the trees. I have been at point 4, 4 and distinctly heard the roar of trains coming and going in this pass.

<sup>1</sup> Prof. Alexander G. McAdie forwards to the Monthly Weather Review a letter from Mr. G. R. Rounthwaite, dated Avalon, Santa Catalina Island, off the coast of southern California, but relating to some photographs of the Cucamonga Mountains, taken from Arlington Heights, latitude 33° 55' north, longitude 117° 25' west, and looking nearly due north. The Cucamonga Mountains lie between the observer and the Cajon Pass between the San Gabriel Range and the San Bernardino Range; one branch of the Southern California Railroad passes through Cajon Pass.

We reproduce Mr. Rounthwaite's beautiful photographs in figs. 1, 2, and 3.



FIG. 1.—Left-hand portion of panoramic view of a storm on the Cucamonga Mountains. 1, 1. Sand flats of southeast Ontario. 2, 2. The mouth of San Antonio Canyon. 3, 3. The citrus colony at Iomosa. 4, 4. Northrup and Hurd's Ranch. 5, 5. DeMense, a citrus orchard. 6, 6. Ontario Peak. 7, 7. Cucamonga Peak. 8, 8. Mr. J. D. Carscaden's residence on Arlington Heights, Riverside.



FIG. 2.—Right-hand portion of panoramic view of a storm on the Cucamonga Mountains. 9, 9. Cajon Pass; Sante Fe and Salt Lake railways enter southern California through this pass. 10, 10. Hills in West Riverside District, about midway between the mountain and the location of the camera. 11, 11. Residence of Mr. J. H. Thompson. 12, 12. South Adams street, Arlington Heights, Riverside.



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FIG. 3.—General view of Old Baldy and Cucamonga Mountains looking toward north-northeast. 13, 13. The round head of Old Baldy at the head of San Antonio Canyon. 14, 14. The summit of the highest peak, Cucamonga.

In the single view, fig. 3, also taken with the same rear combination and ray filter, the following points will be noticed:

13, 13. The round head of Old Baldy, at the head of San Antonio Canyon, which is 15 miles beyond the head of Cucamonga Canyon.

14, 14. The summit of the highest peak, Cucamonga.

Fig. 3 was taken about 7 a. m. and shows with what rapidity the storm clouds of three days previous have been swept from the sky by the north wind. We expect danger from the frosts in the citrus orchards succeeding a day of such clear, cold weather on the mountains, but in nearly all cases the frost is happily averted by a slight wind, and the thermometer goes to its lowest point during the hour before sunrise, dropping say from  $36^{\circ}$  to  $26^{\circ}$  in an hour, and rising again after the sun comes up. These north winds are charged with electricity, which visibly affects the hair in the manes and tails of horses, and causes an exceeding irritability and depressing headache in some human beings. These conditions generally exist for a period of three days, and although the wind blows hard it rarely causes much damage to trees or fruit in the orchards.

#### THE EARTHQUAKE OF DECEMBER 5, 1903, AT WASHINGTON, D. C.

By Prof. Charles F. Marvin.

The seismograph of the Weather Bureau recorded a slight earthquake from a very distant origin on the night of December 4–5, 1903. The apparatus by which this record was made has already been described in the MONTHLY WEATHER REVIEW for June, 1903, page 271. The north and south component of horizontal motion only is recorded.

The "principal portion" of the earthquake was noticeably short; the first portion consisting of only two or three waves of small amplitude, but relatively long periods (fifteen seconds for the duration of one complete vibration) followed by a single, relatively long wave with about the same period, and representing a displacement of the ground of about 0.26 of a millimeter (double amplitude). The period of the pendulum is 26 seconds, and the magnification 10.

The following table gives the corrected times of the principal phases of this earthquake:

December 5, 1903, a. m., seventy-fifth meridian time.

	<i>h.</i>	<i>m.</i>	<i>s.</i>	<i>h.</i>	<i>m.</i>	<i>s.</i>
First preliminary tremor				0	26	20 a. m.
Second preliminary tremor				0	32	32 a. m.
Duration of first preliminary tremor	0	6	12			
Duration of second preliminary tremor	0	3	13			
Principal portion began				0	35	45 a. m.
Principal portion ended				0	36	50 a. m.
Duration of principal portion	0	1	15			
Duration of end portion	0	24	42			
End of earthquake				1	1	32 a. m.

This is the third earthquake that has been distinctly recorded at the Weather Bureau since the present seismograph was installed about the middle of February, 1903.

#### MOUNT WHITNEY AS A SITE FOR A METEOROLOGICAL OBSERVATORY.

By ALEXANDER G. MCADIE, Professor of Meteorology.

In reply to a letter dated June 15, 1903, from the Chief of the Weather Bureau, asking for a report on the advantages and disadvantages of Mount Whitney as a site for a meteorological observatory in connection with the proposed astrophysical observatory, I have the honor to submit the accom-